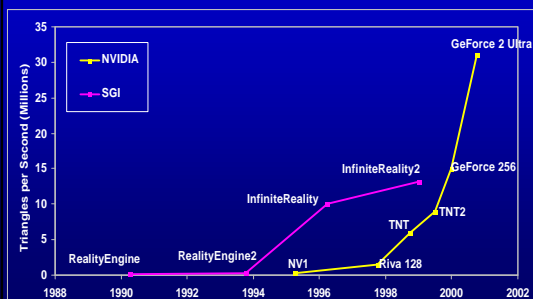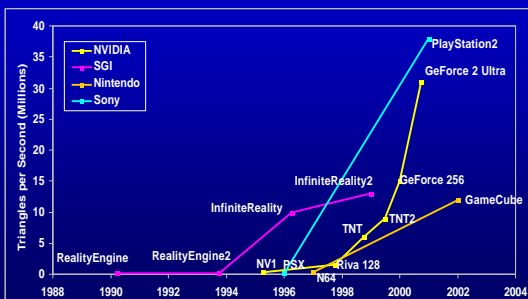**Introduction**

Nate Robins

Avalanche Software

Performance

Consoles

Considerations

- Scalability
  - 16 pipe InfiniteReality2
- Memory
  - Visible Human > 4 GB
- Bandwidth
- Stability
  - Operating System / Driver / Hardware

Accuracy

- Games always trade accuracy for speed
  - How hot is the gun barrel? We don't care!
- Scientific Visualization usually can't
  - How hot is the gun barrel? That's our *business*!

Realism

- Games can sometimes trade realism
  - Immersion is most important
- SciVis can trades realism for information
  - False color maps
  - Transparent casings

Capabilities

- MIP Mapping
  - Williams (1983)
- Bump Mapping
  - Blinn (1978)
- Curved surfaces
  - Catmull (1975)
- Per pixel shading
  - Phong (1975), RenderMan

Research

- Game studios are not R&D houses
- We read about (your) research
  - Internet
  - Proceedings (SIGGRAPH, JGT, etc)
- We read (your) books
  - Foley & VanDam, Numerical Recipes
- Game studios are USERS!

Influence

"How to make friends and influence people"

- Make research available
- Talk to hardware vendors
  - Entice them with unique features

Thanks

- Chris Johnson
- Rob Nelson
- Remlee Dunford
- Gordon Kindlmann
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